

POLAR
PAM
7

POLARPAM

22 1985

Per
A Library

BOREAL INSTITUTE
LIBRARY

062580

Pam:
001.89: (*57)
HIN

Protecting the poles

Why Sweden is taking a sudden interest in Arctic (and Antarctic) research, by Don Hinrichsen.

ON JANUARY 10 1985 Bo Theutenberg became the first Swede to reach the South Pole. He duly placed a Swedish flag there to be torn to shreds by the bitter Antarctic winds. It was not the sort of epic journey usually associated with the region. Theutenberg travelled in style, as much as one can travel in style in Antarctica, with an international delegation, to discuss the future of the icy southern wilderness.

Theutenberg's presence reflects a new awareness in Sweden of the importance of polar research and the protection of both the Antarctic and the Arctic against over-exploitation in the race to exploit mineral wealth.

The Swedish Government has given its nation's polar scientists a SEK 1 million grant to establish the first Swedish Polar Research Secretariat.

The secretariat is located at the Royal Academy of Sciences and although the SEK 1 million is intended only to cover the first year's operating costs, the polar research community (small as it is) anticipates that once the Government can see the bounties of having a central organisation to sort out and consolidate all Swedish polar research, more money will be forthcoming.

There are a number of compelling reasons why Sweden – long left out in the cold (if you'll pardon the expression) when it came to polar research – is now suddenly taking a new look northwards and also to the south. According to polar expert and geographer Professor Valter Schytt of the University of Stockholm, "Sweden was late in the game because we have no Arctic or Antarctic possessions and no Arctic border."

Sweden's Scandinavian neighbours, Denmark and Norway, have been active in polar science for decades

Swedish tracks in the wilderness. A picture taken by Valter Schytt on the Ymer expedition to the Arctic.

and the Swedish scientific community feels it is time to show their own colours. "We missed a lot of opportunities because we had no coordinated structure to channel our research efforts. It was mostly results of individual initiatives," explained Professor Schytt.

The Norwegians, in particular, have been pioneers in polar exploration and the Norwegian Polar Institute in Oslo has been around for years. The Danish interest and involvement stems from Denmark's special relationship with Greenland (initially as a colony and currently as an "economic" dependency).

The Swedish Polar Research Secretariat plans to put Sweden in the polar picture. Anders Karlqvist, its Director, explained that the idea is to focus Swedish polar activities under one roof, creating a sort of "clearing house" for the scientific community, as well as the Government. "We will attempt to collect information on all aspects of Arctic and Antarctic research activities, and identify where there are gaps and what needs to be done," he said.

The secretariat will not actually carry out any research programmes or draw up lists of projects (at least not yet). Its main function will be to keep the scientific community and the Government informed of developments, keeping a watchful eye out for ways in which Sweden might play a greater role in polar research.

The creation of the secretariat comes at a time of more general awareness that what goes on at the poles could significantly affect global interests – strategic, economic and political. If the doomsdayers are correct and the polar regions become the focus of superpower conflict over resources and nuclear strategy, then Sweden wants to have the knowledge and position to perhaps make a difference.

The other, less altruistic, side of the coin, is that Swedish industry is already taking note of the hydrocarbon and mineral deposits in the Arctic and Antarctic. Eventually, when and if technology and market forces combine to make it economically feasible, Swedish industry wants to be in on the rush for the mineral resources of the poles.

Last year a Norwegian-Swedish industrial syndicate was formed to exploit potential natural gas reserves on

Svalbard, Norway's Arctic archipelago (see Sweden Now 5/84, p. 91). Naturally, the Soviet Union and the United States have been exploiting their Arctic oil and gas deposits for the last 20 years. More recently, Canada has begun to drill for oil in ice-clogged Baffin Bay, pushing the limits of technology even further.

As evidence of this heightened interest in all things polar, the Swedish Government formally (and quietly) signed the Antarctic Convention in April 1984, thus giving the country a say in the future of the icebound continent. The treaty comes up for renewal soon and if there is to be a stampede for Antarctic's frozen stakes, then Sweden clearly wants to be in on the spoils.

On the other hand, the science community views the two poles as pristine, unpolluted "reference" areas, where useful research in an undisturbed environment is still possible. Today, only the polar regions remain relatively untouched by modern industrial activities.

This happy state may be changing, irrevocably. There is mounting evidence that both poles are suffering from human interference and, as a result, a growing sense of urgency among polar experts.

The Arctic in particular is under assault from increased pollution loads transported by large air masses that drift up from the industrialized regions of Europe and North America. Reports by Norwegian scientists show concentrations of sulphur dioxide in the Arctic which are comparable to the levels recorded in southern Norway (sulphur dioxide is a main agent in acid rain). Recent tests conducted by four of the five circumpolar nations – Norway, Denmark (Greenland), the United States and Canada – reveal surprisingly high levels of pollutants. Investigations in Svalbard, show high values of sulphur compounds in winter: five micrograms of sulphur dioxide per cubic metre of air and 1.5 micrograms of particulate sulphate per cubic metre of air. Measurements made on the Greenland ice cap indicate that man-made sulphate deposition there may exceed the deposition from natural sources by more than 50 percent.

For these reasons and others, scientists like Valter Schytt are adamant about maintaining a Swedish profile in polar research. In this connection, the expedition in 1980 aboard the icebreaker Ymer was memorable on several counts. As a result of the press coverage and aroused public interest, Government indifference to Arctic research was finally overcome. Professor Schytt said: "That one expedition has had a profound effect on the international scientific community – over the past several years almost every paper presented at scientific conferences on the Arctic have contained data gathered from the Ymer Expedition."

One of the things the Ymer discovered was that – despite the rising levels of air pollution during the winter and early spring months, which have given rise to the phenomena known as "Arctic haze" – the air during the summer months clears up considerably. Researchers measured some of the cleanest air ever recorded on our industrial earth – 3-5 particles per cubic centimetre as compared to 100,000 particles per cubic centimetre in Stockholm. **now**

An Eskimo seal-hunting boat dwarfed by an iceberg off Baffin Island. Picture: Tore Johnson/Tiofoto.



Date Due

062580

Pam:001.89:(*57)
HIN

Author HINRICHSEN, Don

Title Protecting the poles.

Borrower's Name

Date Due

062580

Pam:001.89:(*57) HIN

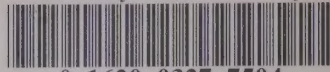
Author-HINRICHSEN, DON

Title-Protecting the poles.

BOREAL INSTITUTE FOR NORTHERN STUDIES LIBRARY

Boreal Institute for Northern
Studies Library
CW 401 Bio Sci Bldg
The University of Alberta
Edmonton, AB Canada T6G 2E9

University of Alberta Library



0 1620 0327 7504